

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Continental Resources, Inc.
Well Name/Number: Maria AHSL
Location: NW NW Section 35 T24N R55E
County: Richland, **MT; Field (or Wildcat)** W/C (Bakken Horizontal)

Air Quality

(possible concerns)
Long drilling time no, 20 to 30 days drilling time.
Unusually deep drilling (high horsepower rig) no, 20,182' MD, 10,294' TVD
Possible H₂S gas production Slight
In/near Class I air quality area no
Air quality permit for flaring/venting (if productive) Yes, DEQ air quality permit required under 75-2-211.
Mitigation:
☒ Air quality permit (AQB review)
☐ Gas plants/pipelines available for sour gas
☐ Special equipment/procedures requirements
☐ Other: _____
Comments: no special concerns – using triple rig to drill single lateral

Water Quality

(possible concerns)
Salt/oil based mud yes, freshwater and freshwater mud system on surface hole and oil based saltwater mud system on mainhole to casing point. Horizontal lateral will be drilled with brine water..
High water table no
Surface drainage leads to live water no, closest drainage is Three Buttes Creek about 1/8 of a mile to the north of this location.
Water well contamination no, no water wells within 1 mile of this location. Surface hole will be drilled with freshwater. About 1960' of surface casing will be set and cemented to surface.
Porous/permeable soils no, bentonite soils
Class I stream drainage no
Mitigation:
☒ Lined reserve pit
☒ Adequate surface casing
☐ Berms/dykes, re-routed drainage
☐ Closed mud system
☐ Off-site disposal of solids/liquids (in approved facility)
☐ Other: _____
Comments: 1960' surface csg. cemented to surface adequate to protect freshwater zones.

Soils/Vegetation/Land Use

(possible concerns)
Stream crossings no, crossing.

High erosion potential no, cut about 16' and fill up to 18, required.
Loss of soil productivity no, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite no, 400'X450' location size required.
Damage to improvements Slight
Conflict with existing land use/values Slight
Mitigation
☐ Avoid improvements (topographic tolerance)
☐ Exception location requested
☒ Stockpile topsoil
☐ Stream Crossing Permit (other agency review)
☒ Reclaim unused part of wellsite if productive
☐ Special construction methods to enhance reclamation
☐ Other _____
Comments: Access will be over existing county roads, and about 550' of new access road will be built into this location off the existed well road. Cuttings will be buried on site in the lined reserve pit. Drilling fluids will be recycled or hauled to a commercial disposal for injection. Pit will be allowed to dry and will be solidified with subsoils and clays before being covered with clean subsoil and topsoil. No special concerns

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences Residences about 1 mile away
Possibility of H2S slight
Size of rig/length of drilling time Triple drilling rig/short 50 to 60 days drilling time
Mitigation:
☒ Proper BOP equipment
☐ Topographic sound barriers
☐ H2S contingency and/or evacuation plan
☐ Special equipment/procedures requirements
☐ Other: _____
Comments: no concerns

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified) n/a None identified.
Proximity to recreation sites no
Creation of new access to wildlife habitat no
Conflict with game range/refuge management no
Threatened or endangered Species no
Mitigation:
☐ Avoidance (topographic tolerance/exception)
☐ Other agency review (DFWP, federal agencies, DSL)
☐ Screening/fencing of pits, drillsite
☐ Other: _____
Comments: no concerns

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified

Mitigation

☐ avoidance (topographic tolerance, location exception)

☐ other agency review (SHPO, DSL, federal agencies)

☐ Other: _____

Comments: on private land

Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: no concerns Super unit well in 2560ac spacing unit.

Remarks or Special Concerns for this site

Well is a single lateral Horizontal Bakken Formation test

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur, but can be mitigated in time.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): Thomas Richmond

(title:) Administrator

Date: November 14, 2013

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website.

(Name and Agency)

Richland County water wells.

(subject discussed)

November 14, 2013

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____